Introduction to Webinar on Upcoming ACI Solicitations January 27, 2014

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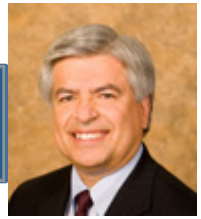
Program Director/Acting Division Director
Advanced Cyberinfrastructure/NSF

In 2013, NSF's Office of Cyberinfrastructure joined CISE (Computing and Information Science and Engineering), one of seven discipline-focused NSF directorates



Office of Inspector General

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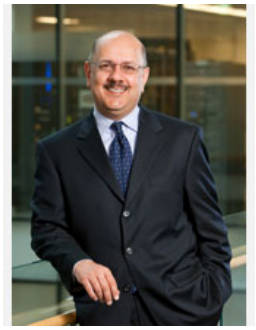
Offices



Biological Sciences Directorate

Mathematical & Physical Sciences Directorate

Computer and Information Science and Engineering Directorate

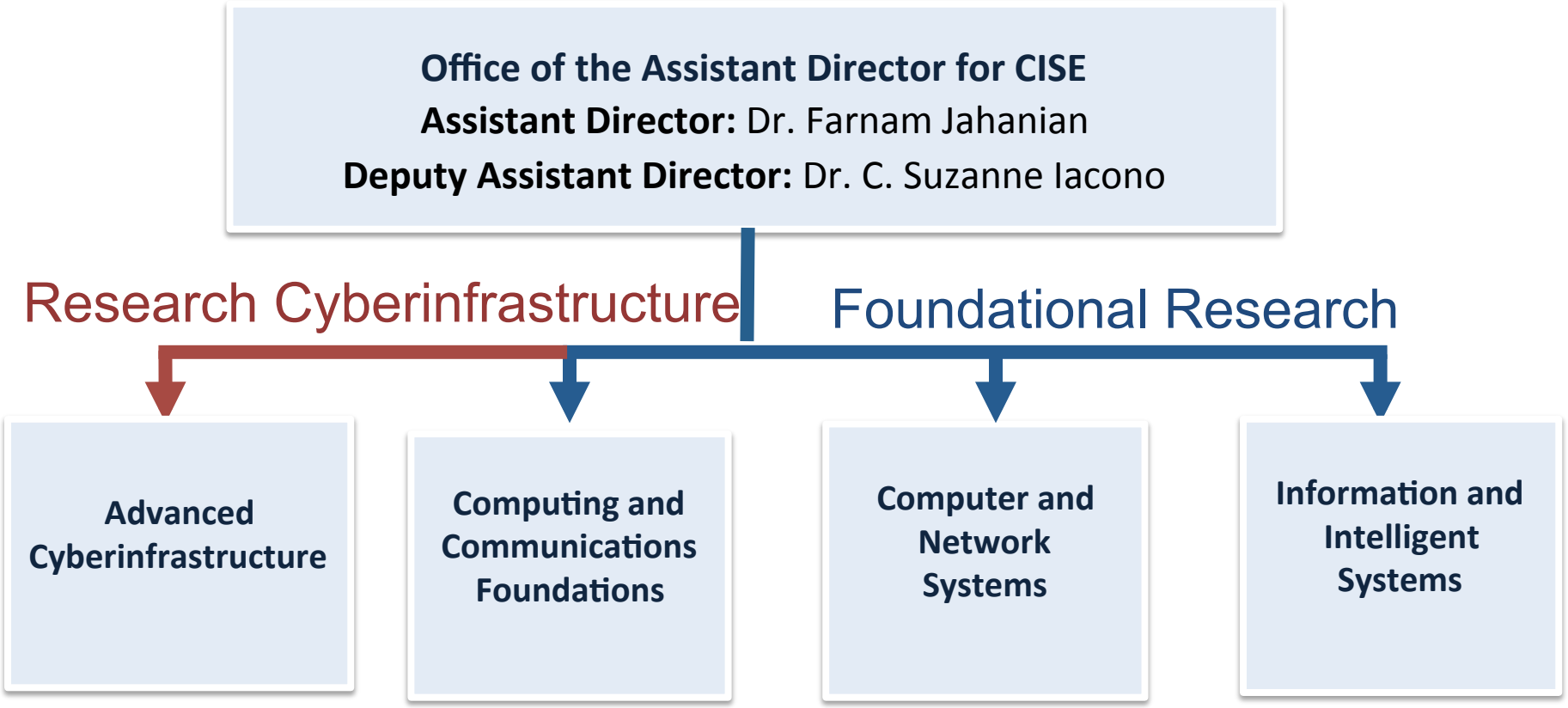
Social, Behavioral & Economic Sciences Directorate

Education & Human Resources Directorate

Geosciences Directorate

Engineering Directorate

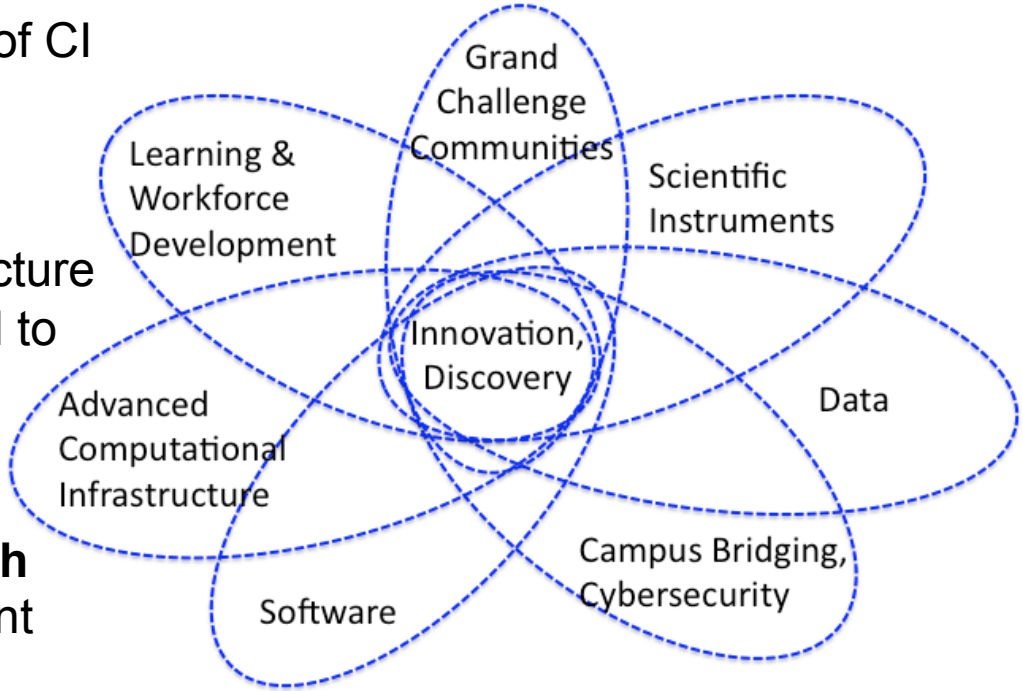
ACI is inherently both multi & cross-disciplinary working with CISE and all NSF directorates



ACI is pivotal to NSF's Vision for Research Cyberinfrastructure (CIF21)

- **Community building** to foster use of CI in scientific discovery
- **Infrastructure collaboration** and coordination
- **Foundational research** in infrastructure components and science related to their use
- **Sustained development** through a diverse, trained workforce
- **Transform the conduct of research** through career path development for computational scientists

CIF21: cyberinfrastructure as an ecological system



http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf12051

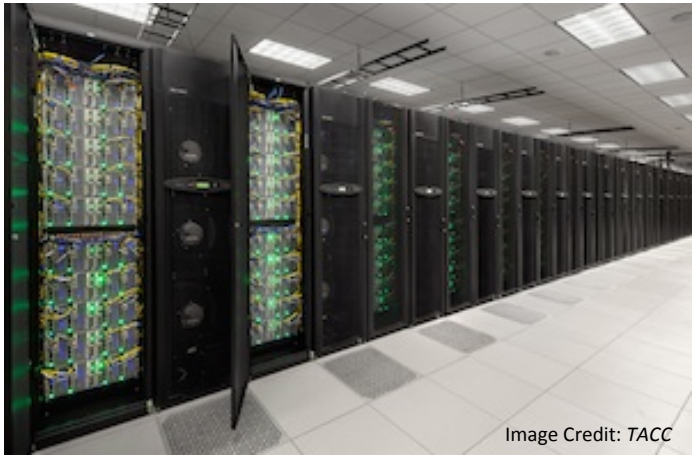
This realization is reflected in FY2013 ACI investment portfolio

Significant investments in:

- HPC/Advanced Computing
- Networking & Cybersecurity
- Data
- Software

Within the overall cyberinfrastructure NSF supported major new deployments in 2013

Blue Waters, UIUC



Stampede, UT Austin

NCAR-Wyoming Supercomputing Center

Reminder: “Data Management Plan”

- NSF Grant & Proposal Guide (GPG), 2013 & 2014, Chapter II.C.2.j
  http://www.nsf.gov/pubs/policydocs/pappguide/nsf13001/gpg_2.jsp#dmp
  http://www.nsf.gov/pubs/policydocs/pappguide/nsf14001/gpg_2.jsp#dmp
- **Plans for data management and sharing of the products of research**. Proposals must include a supplementary document of no more than two pages labeled “Data Management Plan”. This supplement should **describe how the proposal will conform to NSF policy on the dissemination and sharing of research results** (see AAG Chapter VI.D.4), and may include:
  a. the types of data, samples, physical collections, software, curriculum materials, and other materials to be produced in ... the project
  b. the standards to be used for data and metadata format and content ...
  c. policies for access and sharing ...
  d. policies and provisions for re-use, re-distribution, and the production of derivatives
  e. plans for archiving data, samples, and other research products, and for preservation of access to them

Looking to the Future: "Open Data Policy" Guidance

- Recent "Open Data Policy" Guidance from OMB
  - http://www.whitehouse.gov/sites/default/files/omb/memoranda/2013/m-13-13.pdf
  - "... requires agencies to collect or create information in a way that supports downstream information processing and dissemination activities ... includes using machine- readable and open formats, data standards, and common core and extensible metadata for all new information creation and collection efforts ... use of open licenses ..."
  - Open data is defined as consistent with principles: public, accessible, described, reusable, complete, timely, and manage post-release
- Affect on NSF policies to come

Today's Agenda

10:30 AM **Welcome and overview**
Irene Qualters, Acting Division Director, CISE/ACI

10:50 AM **Data Infrastructure Building Blocks (DIBBs)**
Amy Walton, Program Director, CISE/ACI

12:00 PM **Campus Cyberinfrastructure: Infrastructure, Innovation Engineering (CC*IIE)**
Kevin Thompson, Program Director, CISE/ACI

1:00 PM **Break**

2:30 PM **Software Infrastructure for Sustained Innovation (SI^2)**
Daniel Katz, Program Director, CISE/ACI

3:45 PM **Petascale Computing Resource Allocations (PRAC)**
Rudolf Eigenmann, Program Director, CISE/ACI

Other solicitations of interest

1. **Designing Materials to Revolutionize and Engineer our Future – DCL**
   http://www.nsf.gov/pubs/2014/nsf14020/nsf14020.pdf
   Due dates vary from 1/15/14 to 2/18/14
2. **Exploiting Parallelism and Scalability**
   http://www.nsf.gov/pubs/2014/nsf14516/nsf14516.htm
   Submission window dates: 2/10/14 – 2/24/14
3. **Building Community and Capacity for Data-Intensive Research in the Social, Behavioral, and Economic Sciences and in Education and Human Resources**
   http://www.nsf.gov/pubs/2014/nsf14517/nsf14517.htm
   Full proposal deadline: 3/3/14
4. **EarthCube: Developing a Community-Driven Data and Knowledge Environment for the Geosciences**
   http://www.nsf.gov/pubs/2013/nsf13529/nsf13529.htm
   Full proposal deadline for Research Coordination Networks and Building Blocks: 3/12/14
5. **STEM-C Partnerships: Computing Education for the 21st Century**
   http://www.nsf.gov/pubs/2014/nsf14523/nsf14523.htm
   Full proposal deadline: 3/18/14
6. **STEM-C Partnerships: Math and Science Partnership**
   http://www.nsf.gov/pubs/2014/nsf14522/nsf14522.htm
   Full proposal deadline: 3/18/14
7. **Dimensions of Biodiversity FY2014**
   http://www.nsf.gov/pubs/2014/nsf14525/nsf14525.htm
   Full proposal deadline: 4/3/14
8. **Cyberlearning and Future Learning Technologies**
   http://www.nsf.gov/pubs/2014/nsf14526/nsf14526.htm
   Letters of intent: 5/12/14. Other due dates vary from 3/19/14 to 1/19/15
9. **Research Experience for Undergraduates: Sites and Supplements**
   http://www.nsf.gov/pubs/2013/nsf13542/nsf13542.htm
   Full proposal deadlines: 5/23/14 for access to Antarctica, 8/27/14 for all others

Other solicitations of interest

10. **Industry/University Cooperative Research Centers Program (I/UCRC)**
    http://www.nsf.gov/pubs/2013/nsf13594/nsf13594.htm
    Letters of intent: 6/27/14. Subsequent Planning Grants and Full Proposals: 9/26/14
11. **Collections in Support of Biological Research**
    http://www.nsf.gov/pubs/2013/nsf13557/nsf13557.htm
    Full proposal deadline: 7/13/15
12. **Advances in Biological Informatics**
    http://www.nsf.gov/pubs/2012/nsf12567/nsf12567.htm
    Full proposal deadline: 8/12/14
13. **Computational and Data-Enabled Science and Engineering (CDS&E)**
    http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504813
    Due dates vary by NSF Division, from 9/1/14 to 12/1/14
14. **Secure and Trustworthy Cyberspace**
    http://www.nsf.gov/pubs/2013/nsf13578/nsf13578.htm
    Submission windows vary from 9/2/14 to 1/14/15
15. **CISE Research Infrastructure**
    http://www.nsf.gov/pubs/2013/nsf13585/nsf13585.htm
    Full proposal deadline: 10/7/14
16. **Advancing Digitization of Biodiversity Collections**
    http://www.nsf.gov/pubs/2013/nsf13569/nsf13569.htm
    Full proposal deadline: 10/17/14
17. **Expeditions in Training, Research, and Education for Mathematics and Statistics through Quantitative Explorations of Data**
    http://www.nsf.gov/pubs/2012/nsf12606/nsf12606.htm
    Full proposal deadline: 11/5/14
18. **Computational and Data-Enabled Science and Engineering in Mathematical and Statistical Sciences**
    http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504687
    Full proposal window varies from 11/25/14 to 12/9/14

NSF Careers: Current ACI Positions

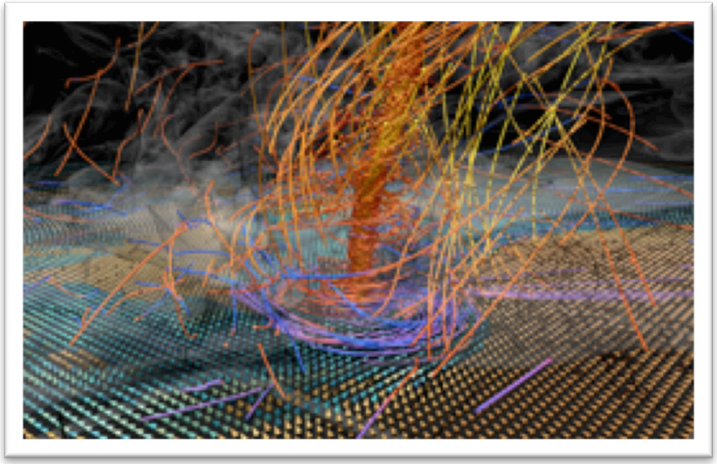
- **Division Director, Division of Advanced Cyberinfrastructure, ES-1550-00 (Closes: 2/5/2014)**
  Available Formats: HTML
  Vacancy Number: aci20140001
  Posted: January 6, 2014
- **Computer Scientist (Program Director) AD-1550-04 (Closes: 2/21/2014)**
  Available Formats: HTML
  Vacancy Number: aci20140002
  Posted: January 9, 2014
- **Dear Colleague Letter: Program Director, Division of Advanced Cyberinfrastructure Employment Opportunities (Open Until Filled)**
  Available Formats: HTML | PDF | TXT
  Vacancy Number: aci14001
  Posted: December 19, 2013

NSF's cyberinfrastructure – two key ACI strategies

Vision: Support a comprehensive portfolio of advanced cyberinfrastructure, programs and other resources to facilitate cutting-edge foundational research in Computational and Data Enabled Science and Engineering (CDS&E) and its applications to all disciplines.

- Anticipate and invest in diverse and innovative national scale shared resources, outreach and education complementing campus and other national investments

- Leverage and invest in collaborative flexible "fabrics" dynamically connecting scientific communities with computational resources and services at all scales (campus, regional, national, international)



Tornado Simulation Credit: Bob Wilhelmson, NCSA and the University of Illinois at Urbana-Champaign; Lou Wicker, National Oceanic and Atmospheric Administration's National Severe Storms Laboratory; Matt Gilmore and Lee Cronce, University of Illinois atmospheric science department. Visualization by Donna Cox, Robert Patterson, Stuart Levy, Matt Hall and Alex Betts, NCSA

Thank you

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